Remarks

Claims 1-29 and 41-43 remain pending in the present application, of which Claims 1, 5, 11, 20-27, and 29 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

Beginning with the indefiniteness rejection, under 35 U.S.C. § 112, second paragraph, of Claims 11-19, it is believed that the above amendments overcome this indefiniteness rejection.

Claims 1-3, 5, 7-11, 14, 16-25, and 41-43, have been rejected under 35 U.S.C. § 102(b), as being anticipated by Yamaguchi (U.S.P. 5,975,950). Claim 4 has been rejected under 35 U.S.C. § 103(a), as being unpatentable over Yamaguchi in view of Schumacher (U.S.P. 3,828,298). Applicants respectfully traverse these rejections for reasons set forth hereafter.

Initially, the Examiner is thanked for indicating Claims 6, 12, 13, 15, and 26-29, to be allowable if rewritten appropriately. While, Claims 26, 27, and 29 have been rewritten in independent form, Applicants continue to believe that the previously pending Claims define allowable subject matter.

With regard to Claim 1, a cable connector is recited that includes first and second insulated housings matable with one another; first and second center contacts being inserted into first and second cavities within respective housings; and first and second outer ground contacts. At least one of the first and second center contacts constitutes a blade contact having a flat planar body section.

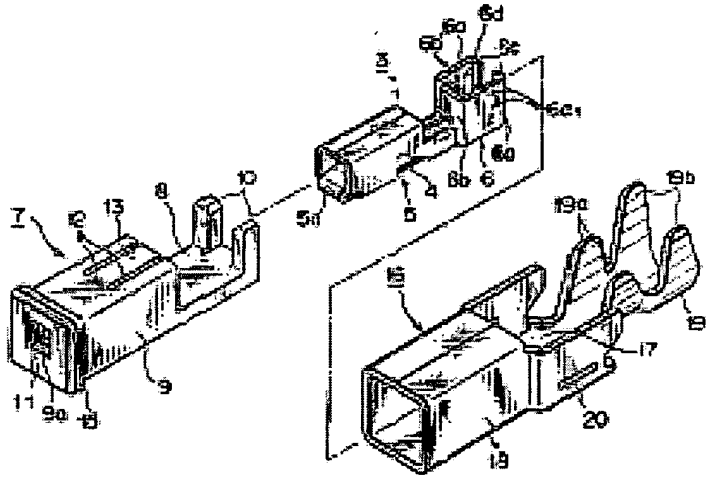
It is submitted that Yamaguchi fails to teach or suggest the claimed combination and lacks, among other things, a blade contact having a flat planar body section. Instead, Yamaguchi discloses an inner terminal 3 provided with an electrical contact 5 that is described and illustrated as follows:

> The electrical contact 5 is formed as a cylindrical tab receiving portion for receiving the tab-like electrical contact of the shielding terminal 2', which is the mating terminal. The electrical contact 5 is provided with an elastic tongue 5a,

extending from the top edge of the conductive substrate 4 and bending toward the inside of the tab receiving portion (column 4, lines 25-31).

To better illustrate the structure of electrical contact 5', Figure 4 of Yamaguchi is reproduced hereafter.

FIG. 4



It is quite clear from Figure 4 of the Yamaguchi patent and from the above quotation from Yamaguchi that the electrical contact 5 does not teach or suggest a blade contact having a flat planar body section. As clearly stated by Yamaguchi, the electrical contact 5 includes a cylindrical tab receiving portion and includes an elastic tongue 5a, which extends from the top edge of the conductive substrate 4 and is bent toward the inside of the tab receiving portion.

Further, Yamaguchi discloses no other contact resembling the claimed structure. The electrical contact 5' of the male-type inner terminal 3' of Yamaguchi does not teach or suggest the claimed contact structure. The contact 5' is illustrated in Yamaguchi only in cross-section in Figures 1 and 2 and is simply described in the text as a "tab-like" contact (see column 6, lines 6-9). Hence, the structure of electrical contact 5' is not specifically described nor illustrated by Yamaguchi. Notwithstanding, it is believed that, after a close review of the contact 5, that contact 5' is not a blade contact having a flat planar body section. The contact 5' of the male type inner terminal 3', must be inserted through a contact receiving opening 9a in the holding

cylinder 9 and through the opening in the end of the receiving portion of contact 5. The opening in contact 5 and the opening 9a in the cylinder 9 are both square openings. It is submitted that such square openings are not intended, nor designed, to accept a blade contact having a flat planar body section. Hence, contact 5' does not teach the claimed contacts.

Moreover, it is submitted that the person of ordinary skill would not have been motivated to modify Yamaguchi's connector in a manner that would have rendered obvious the invention of claim 1. Yamaguchi's connector forms a geometry which is generally referred to as a square coaxial connector geometry. Connectors having this square coaxial geometry afford certain electrical and mechanical characteristics. Square coaxial connectors do not include blade contacts having the claimed structure; but, instead, have contacts, such as in Yamaguchi.

Modifying Yamaguchi's contacts 5 and 5' would cause Yamaguchi's connector to no longer afford the electrical and mechanical characteristics of a square coaxial connector. It is submitted that no motivation exists to make such a modification to Yamaguchi. Accordingly, Yamaguchi does not anticipate, nor render obvious, Claim 1.

Independent Claim 11 recites a coaxial cable connector that includes a connector housing, a pair of ground contacts, and a center contact. The connector housing maintains the center contact and the pair of ground contacts in parallel planes with the center contact positioned between the pair of ground contacts in a strip line geometry. The claimed geometry is simply not described, nor suggested, by Yamaguchi. Instead, Yamaguchi teaches a square coaxial geometry. In Yamaguchi's own words, the electrical contact 5 is formed as a cylindrical tab receiving portion. Yamaguchi further explains contact 5' as follows:

> First, an electrical contact 5' of male-type inner terminal 3', which constitutes the male-type shielding terminal 2' takes a tab-like form in conformity with the electrical contact 5 of the female-type inner terminal 3 (column 6, lines 6-9).

The interconnection between contacts 5 and 5' clearly does not teach, nor render obvious, the claimed configuration of a center contact positioned between a pair of ground contacts in

parallel planes in a strip-line geometry. Hence, claim 11 is neither anticipated nor rendered obvious by Yamaguchi.

Turning to Claim 20, a co-axial cable connector is recited, having a housing, a center blade contact having a flat planar body and ground contacts. The ground and center blade contacts are retained by the housing and are arranged parallel to one another. As explained above, Yamaguchi does not teach a blade contact having a flat planar body. Nor does Yamaguchi teach or suggest arranging ground and center blade contacts parallel to one another.

With regard to Claim 41, a co-axial cable connector is recited having a housing, a center contact, and a ground contact. The center and ground contacts form an asymmetric electric field distribution about the housing. The asymmetric electric field distribution has its flux density focused in major areas extending outward from opposite sides of the center contact.

Yamaguchi teaches no such contact and ground configuration. In Yamaguchi, neither contact 5, and contact 5' and outer terminals 16 and 16' form a symmetric electric field distribution. Claim 41 clearly defines the structure of the center and ground contacts to form an asymmetric electric field distribution having flux density focused in major areas extending outward from opposite sides of the center contact. In Yamaguchi, contacts 5 and 5' and outer terminals 16 and 16' are uniform in shape about the entire perimeter and thus would not form the claimed asymmetric electric field distribution. Nor would Yamaguchi's symmetrically shaped contacts, 5 and 5' and outer terminals 16 and 16' focus flux density in major areas, extending from opposite sides of the center contact. Hence, Claim 41 is neither anticipated, nor rendered obvious, by Yamaguchi.

Schumacher fails to make up for the deficiencies in Yamaguchi. Schumacher discloses an electrical terminal for a braided shield on a co-ax cable. The terminal 20 does not include a center contact and is entirely void of grounding contacts.

Turning to the dependent claims, it is submitted that the dependent Claims recite additional details not found in the prior art. While not every dependent claim is discussed

hereafter in detail, it is believed that each dependant claim recites patentable features not taught by the prior art.

For example, Claim 7 defines the outer ground contacts and center contacts to be mounted to the housings and layered in parallel planes in a strip-line geometry. As explained above, the prior art does not teach or suggest contacts in a strip-line geometry. Claim 10 states that the first and second center and outer ground contacts generate an electric field concentrated proximate and along an axis extending perpendicular to planar walls. The prior art does not teach or suggest contacts that would generate such electric field concentration.

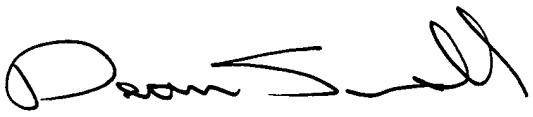
Claim 18 defines the center contact and the pair of ground contacts as generating an electric field having a magnitude focused in regions extending in a direction transverse to the parallel planes in which the center contact and ground contacts are maintained by the housing. Yamguchi's contacts 5 and 5' would not focus electric field magnitude in such a manner.

Claim 22 further defines that the center and ground contacts form an asymmetric electric field distribution about the housing. The asymmetric field distribution has its flux density focused in major areas extending outward from opposite sides of the planar body of the center contact. Yamaguchi's contacts 5 and 5' afford no such field distribution.

Claims 23 and 42 recite that the ground and center blade contacts define a strip line geometry, forming an electric field distribution focused in primary and secondary areas. The primary areas have a greater flux density concentration than in the secondary areas. Claims 24 and 43 define the ground and center blade contacts to form an asymmetric electric field distribution with regions of low flux density located proximate edges of the center blade contact. Again, the prior art lacks a contact configuration that would generate such field distributions.

In view of the foregoing, it is respectfully submitted that the pending claims define allowable subject matter. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



Dean Small
Registration No. 34,730
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

APPENDIX

CLAIMS

1. (Amended) A cable connector for interconnecting coaxial cables having center and outer conductors, comprising:

first and second insulated housings matable with one another and configured to receive coaxial cables, said first and second insulated housings including first and second cavities, respectively;

first and second center contacts configured to securely attach to center conductors of coaxial cables, said first and second center contacts being inserted into said first and second cavities, respectively, at least one of said first and second center contacts constituting a blade contact having a flat planar body section; and

first and second outer ground contacts configured to securely attach to outer conductors of coaxial cables, said first and second outer ground contacts each having at least one planar wall secured to a respective first and second insulated housing, said planar walls of said first and second outer ground contacts being positioned on opposite sides and parallel to said planar body section.

5. The cable connector of claim 1, wherein ~~at least one of said first and second center contacts constitutes a blade contact having said planar body section,~~ said blade contact defines~~ing~~ a contact plane located between, and arranged parallel to, said planar walls.

11. (Amended) A coaxial cable connector comprising:

a connector housing configured to receive a coaxial cable having inner and outer conductors;

a pair of ground contacts, each contact configured to be connectable to an outer conductor of the ~~a~~ coaxial cable; and

a center contact configured to be connectable to an inner conductor of the ~~a~~ coaxial cable, said connector housing maintaining said center contact and said pair of ground contacts in parallel planes, said center contact positioned between said pair of ground contacts in a strip line geometry.

20. (Amended) A coaxial cable connector, comprising:

a housing having opposite ends configured to be connectable to a pair of coaxial cables;

a center blade contact having a flat planar body, said center contact being configured to be connected to conductors in said pair of coaxial cables; and

ground contacts configured to be connected to ground conductors in said pair of coaxial cables, said ground and center blade contacts being retained by said housing and being arranged parallel to one another.

21. (Amended) The coaxial cable connector of claim 20, wherein ground contacts have planar bodies located on opposite sides of said planar body of said center contact, said planar bodies of said ground contacts being arranged parallel to said planar body of said center blade contact.

22. (Amended) The coaxial cable connector of claim 20, wherein said pair of coaxial cables form circumferentially symmetric electric field distributions proximate opposite ends of said housing and said center blade and ground contacts form an asymmetric electric field distribution about said housing, said asymmetric electric field distribution having flux density focused in major areas extending outward from opposite sides of said planar body.

23. (Amended) The coaxial cable connector of claim 20, wherein said ground and center blade contacts define a strip-line geometry forming an electric field distribution focused in

primary and secondary areas, said primary areas having a greater flux density concentration than in said secondary areas.

24. (Amended) The coaxial cable connector of claim 20, wherein said ground and center blade contacts form an asymmetric electric field distribution with regions of low flux density located proximate edges of said center blade contact.

25. (Amended) The coaxial cable connector of claim 20, wherein said ground contacts include body sections arranged parallel to said planar body of said center blade contact and include side walls arranged perpendicular to said planar body of said center blade contact.

26. (Amended) ~~The coaxial cable connector of claim 20~~ A coaxial cable connector, comprising:

a housing having opposite ends configured to be connectable to a pair of coaxial cables;

a center contact having a planar body, said center contact being configured to be connected to conductors in said pair of coaxial cables; and

ground contacts configured to be connected to ground conductors in said pair of coaxial cables, said ground and center contacts being retained by said housing and being arranged parallel to one another, wherein said housing includes a rectangular body portion with a recessed slot therein receiving said center contact, said body portion having flat opposed side walls engaging said ground contacts, said body portion forming a dielectric layer between said center and ground contacts.

27. (Amended) ~~The coaxial cable connector of claim 20~~ A coaxial cable connector, comprising:

a housing having opposite ends configured to be connectable to a pair of coaxial cables;

a center contact having a planar body, said center contact being configured to be connected to conductors in said pair of coaxial cables; and

ground contacts configured to be connected to ground conductors in said pair of coaxial cables, said ground and center contacts being retained by said housing and being arranged parallel to one another, wherein said housing is formed of a dielectric material shaped with flat exterior walls engaging said ground contacts and with an interior cavity receiving said center contact, said exterior walls and interior cavity spacing said center and ground contacts apart by a predetermined distance.

29. (Amended) ~~The coaxial cable connector of claim 20~~ A coaxial cable connector, comprising:

a housing having opposite ends configured to be connectable to a pair of coaxial cables;

a center contact having a planar body, said center contact being configured to be connected to conductors in said pair of coaxial cables; and

ground contacts configured to be connected to ground conductors in said pair of coaxial cables, said ground and center contacts being retained by said housing and being arranged parallel to one another, wherein said center contact including first and second blade contacts mated with one another in a cross arrangement to form a dual strip-line geometry.